

Amendments to the Specification:

Please amend paragraph [0001] of the specification as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This is a utility application of provisional application Ser. No. 60/469,667, filed May 12, 2003, and is a continuation-in-part of U.S. Utility patent application Ser. No. 10/375,161, filed Feb. 26, 2003, which is a continuation-in-part of U.S. Utility patent application Ser. No. 10/321,161, filed Dec. 17, 2002 which is the US Utility Patent Application of a Provisional Patent Application Ser. No. 60/427,333, filed Nov. 19, 2002. This application is related to co-pending Patent Application Serial No. 10/234,302 filed September 4, 2002 and U.S. Patent Application Serial No. 10/234,301 filed September 4, 2002, the subject matter of these patent documents is incorporated by reference herein in its entirety.

Please amend paragraph [0017] of the specification as follows:

[0017] There has been recent activity in developing thin, flexible displays that utilize pixels of electro-luminescent materials, such as OLEDs. Such displays do not require any back lighting since each pixel element generates its own light. Typically, the organic materials are deposited by solution processing such as spin-coating, by vacuum deposition or evaporation. As examples, U.S. Pat. No. 6,395,328, issued to May, teaches an organic light emitting color display wherein a multi-color device is formed by depositing and patterning thin layers of light emissive material. U.S. Pat. No. 5,965,979, issued to Friend, et al., teaches a method of making a light emitting device by laminating two self-supporting components, at least one of which has a thin layer of light emitting layer. U.S. Pat. No. 6,087,196, issued to Strum, et al., teaches a fabrication method for forming organic semiconductor devices using ink jet printing for forming thin layers of organic light emitting material. U.S. Pat. No. 6,416,885 B1, issued to Towns et al., teaches an electro-luminescent device wherein a conductive polymer thin layer is disposed between an organic light emitting thin layer and a charge-injecting thin layer that resists lateral spreading of charge carriers to improve the display characteristics. U.S. Pat. No. ~~6,48,200 B1~~ 6,420,200, issued to Yamazaki et al., teaches a method of manufacturing an electro-optical device using a relief printing or screen printing method for printing thin layers of electro-optical material. U.S. Pat. No. 6,402,579 B1, issued to Pichler et al., teaches an organic light-emitting device in which a multi-layer structure is formed by DC magnetron

sputtering to form multiple thin layers of organic light emitting material.

Please amend paragraph [0018] of the specification as follows:

[0018] Electrophoretic displays are another type of display that has recently been the subject of research. U.S. Pat. No. 6,422,687 ~~6,50,687-B1~~, issued to Jacobson, teaches an electronically addressable microencapsulated ink and display. In accordance with the teachings of this reference, microcapsules are formed with a reflective side and a light absorbing side. The microcapsules act as pixels that can be flipped between the two states, and then keep that state without any additional power. In accordance with the teaching of this reference, a reflective display is produced where the pixels reflect or absorb ambient light depending on the orientation of the microcapsules.

Please amend paragraph [0253] of the specification as follows:

[0253] FIG. 1 illustrates an embodiment of the inventive thin, lightweight, flexible, bright wireless display having components capable of being manufactured by the inventive fabrication method, showing the simultaneous display of mapped hyperlinked content, a videophone stream and a broadcast TV stream. In accordance with the present invention, a thin, lightweight, flexible, bright wireless display is obtained having components capable of being manufactured by the inventive fabrication method. The present invention enables a low cost, flexible, robust, full color video display to be obtained. This wireless display is capable of receiving multiple display information signals and displaying the simultaneous screens of the received display information in re-configurable formats. A relatively simple signal receiving and processing circuit, using, for example, a digital signal processor such as those available from Texas Instruments, Texas or Oxford Microdevices, Connecticut, enables multiple video and still image screens to be displayed. An inventive manufacturing method described herein and in the co-owned patent application Serial No. 10/234,301 filed September 4, 2002 entitled "Printer and Method for Manufacturing Electronic Circuits and Displays" (incorporated by reference herein) enables the inventive wireless display to be fabricated at low cost and with the advantageous features described herein. As will be described in more detail, a flexible substrate provides a support structure upon which components can be manufactured by a fabrication method. A display stratum includes light emitting pixels for displaying information. The light emitting pixels are formed, by printing or otherwise forming a pixel layer(s) of light-emitting conductive polymer. An electronic circuit stratum includes signal transmitting components for transmitting user input signals to a

display signal generating device for controlling display information transmitted from the display signal generating device. Signal receiving components receive the display information transmitted from the display signal-generating device. Display driving components drive the display layer according to the received display information. A user input stratum receives user input and generates the user input signals. A battery stratum provides electrical energy to the electronic circuit stratum, the user input stratum and display stratum components. The signal receiving components may include first radio frequency receiving components for receiving a first display signal having first display information carried on a first radio frequency and second radio frequency receiving components for receiving a second display signal having second display information carried on a second radio frequency. In this manner, two or more simultaneously transmitted video displays can be simultaneously displayed. The display driving components may include signal processor components for receiving the first display signal and the second display signal and generating a display driving signal for simultaneously displaying the first display information at a first location on the display stratum and the second display information at a second location on the display stratum. At least some of the components in the battery, display, user input and electronic circuit stratum can be formed by printing electrically active material to form circuit elements including resistors, capacitors, inductors, antennas, conductors and semiconductor devices.

Please amend paragraph [0255] of the specification as follows:

[0255] Solar cell components or layers can be used to "recycle" the energy emitted by the OLED emitters. Some of the emitted and ambient light energy impinges on the solar cells and generate electricity. This, along with the inventions described herein and the sheet battery described in the above-referenced co-owned Patent Applicant Application Serial No. 10/234,301 filed September 4, 2002 entitled "Printer and Method for Manufacturing Electronic Circuits and Displays", can enable lightweight, relatively inexpensive, dichromatic newspapers (as described herein in FIG. 1) that recharge in sunlight (or even indoor ambient light) to enable full-color emissive video display.

Please amend paragraph [0269] of the specification as follows:

[0269] FIG. 13 illustrates an inventive display fabrication line using modular printers for forming various stratum of a thin, lightweight, flexible wireless display. Display fabrication line uses mix of different fabrication stations 22. Examples of fabrication stations 22 can be found in co-owned U.S. patent application Ser. No. 10/234,301 filed September 2, 2002

entitled "Printer and Method for Manufacturing Electronic Circuits and Displays". The various layers of a display include battery, electronic circuit, user input and display stratum are formed at different fabrication stations 22. In accordance with the present invention, fabrication stations 22 for forming an OLED light emissive device is provided. A top electrode 14 and a bottom electrode 14 define a gap there between. Disposed within the gap, field reactive OLED particulates are randomly dispersed within a fluid carrier 12. Depending on the device being fabricated, an aligning field may be applied between the top electrode 14 and the bottom electrode 14 to form a desired orientation of the field reactive OLED particulate within the fluid carrier 12 between the top electrode 14 and the bottom electrode 14. The carrier 12 comprises a hardenable material, such as a light-curable liquid monomer. The carrier 12 is cured to form a hardened carrier 12 for maintaining the desired orientation of the field reactive OLED particulate within the hardened carrier 12. The OLED particulate may comprise a bipolar OLED microcapsule 10 or other OLED-based structure that is capable of forming chains between the electrodes 14.

Please amend paragraph [0308] of the specification as follows:

[0308] FIG. 51 shows an inventive OLED display fabricated with thin films of organic material with photodetection elements. Photodetector elements can be incorporated into each pixel stack, or disposed in a different resolution grid. The ambient light, whether sunlight, lamplight or firelight, received by the photodetectors is used to control the optical characteristics of the OLED pixels associated with each photodetector. This construction can be used with microcapsule-based fabrication or any other display constructions. This enables features such as windshields that block out (using, for example, LCD-type shutters) high light sources, such as bright sunshine, overhead streetlights, or headlights beaming from another car. OLED solar cell components or pixel layers can be used to "recycle" the energy emitted by the OLED emitters. Some of the emitted light energy impinges on the solar cells and generate light. This, along with the inventions described herein and the sheet battery described in the above-referenced co-owned Patent Applicant Application Serial No. 10/234,301 filed September 4, 2002 entitled "Printer and Method for Manufacturing Electronic Circuits and Displays", can enable lightweight, relatively inexpensive, dichromatic newspapers (as described herein in FIG. 1) that recharge in sunlight (or even indoor ambient light) to enable full-color emissive video or still images.